Catalogue no. 82-624-X
ISSN 1925-6493

Health at a Glance

Mental health of the Canadian Armed Forces

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Release date: November 25, 2014

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Published by authority of the Minister responsible for Statistics Canada

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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

Health at a Glance

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Highlights

- In 2013, about 1 in 6 full-time Regular Force members of the Canadian Armed Forces reported symptoms of at least one of the following disorders: major depressive episode, panic disorder, post-traumatic stress disorder, generalized anxiety disorder, and alcohol abuse or dependence.
- Depression was the most common disorder with 8.0% of Regular Force members reporting symptoms in the past 12 months.
- The 12-month rates for post-traumatic stress disorder and panic disorder were twice as high among Regular Force members who had been deployed in support of the mission in Afghanistan compared to those who had not.
- Between 2002 and 2013 the rate of depression among Regular Force members has not changed, while the rates of post-traumatic stress disorder and panic disorder increased.
- Regular Force members had higher rates of depression and generalized anxiety disorder than the general Canadian population.

Understanding the mental health of the Canadian Armed Forces has important implications for those who have disorders and for military organizations. At the individual level, mental disorders are commonly associated with distress or disability, behavioural or psychological dysfunction, pain, and sometimes death.[1] For the military, these conditions have been identified as the leading causes of reduced productivity, absenteeism, and turnover.[2, 3]

Military populations are at potential risk of mental health issues because their job can involve exposure to trauma, separation from family, frequent moves and stressful living conditions.[4] Exposure to traumatic events during combat and peacekeeping missions has been associated with mental disorders in military personnel.[5] For example, previous research found that among members of the Canadian Armed Forces who were deployed in support of the Afghanistan mission between 2001 and 2008, about 13.5% had been clinically diagnosed with a mental disorder that could be linked to their involvement in the Afghanistan mission.[6]

This article describes results from the 2013 Canadian Forces Mental Health Survey (CFMHS). The survey collected information on five selected mental disorders from full-time **regular members of the Canadian Forces**, and only **reservists** who had been deployed in support of the mission in Afghanistan. This article highlights both lifetime and 12-month rates of five selected disorders for Regular Force

members. Lifetime rates reflect those who had met the criteria for a disorder at some point in their life. In contrast, the 12-month rates provide information on relatively recent cases. The 12-month rates are examined by sex and deployment history, and they are compared with both the 2002 rates and those from the general Canadian population.

Canadian Armed Forces members

This article refers to two types of Canadian Armed Forces members:

1. **Regular Force members** serve as full-time members of the Canadian Armed Forces. When required, deployment[7] within Canada or overseas is mandatory. Deployments include responding to national disasters, peacekeeping, or involvement in combat and peace support missions, such as the Afghanistan mission.[8] About 45% of Regular Force members included in this survey had been deployed in support of the mission in Afghanistan.
2. **Reserve Force members (reservists)** largely serve part-time in the Canadian Armed Forces. Their main role is to support the Regular Force at home and abroad. Reservists may be asked to serve full-time as part of a mission overseas; however, their participation is effectively voluntary,[9] and most reservists never deploy. Consistent with the objectives of this survey, only Reserve Force members deployed in support of the mission in Afghanistan were interviewed.

Lifetime rates among Regular Force members

In 2013, about one-half of Regular Force members (48.4%) met the criteria for at least one of the five **selected mental or alcohol disorders** at some point in their lives (Table 1).

Alcohol abuse or dependence was the most common disorder with one-third of Regular Force members (31.9%) meeting the criteria in their lifetime. This finding parallels the general Canadian population, where in 2012, alcohol abuse or dependence was also the most common disorder over the lifetime.[10]

Alcohol abuse (24.1%) was more commonly reported than **alcohol dependence** (7.8%) among Regular Force members, just as it was in the general Canadian population (data not shown).[11] Past alcohol abuse or dependence made the largest contribution to the overall rate of lifetime disorders in both the Regular Force and Canadian populations.

Depression was the second most common disorder experienced over the lifetime, followed by **post-traumatic stress disorder** and **generalized anxiety disorder**. About the same proportion of Regular Force members reported symptoms of generalized anxiety disorder (12.1%) and post-traumatic stress disorder (11.1%) in their lifetime.

Symptoms of **panic disorder**, characterized by unexpected recurrent attacks of intense fear and anxiety in the absence of real danger, were reported as having occurred by 5.8% of Regular Force members at some point in their lifetime.

Table 1
Regular Force members, selected mental or alcohol disorders, lifetime and 12-month rates, 2013

	Lifetime	12-month
	percentage	
Any selected mental or alcohol disorder[1]	**48.4**	**16.5**
Depression	15.7	8.0
Generalized anxiety disorder	12.1	4.7
Post-traumatic stress disorder	11.1	5.3
Panic disorder	5.8	3.4
Alcohol abuse or dependence[2]	**31.9**	**4.5**
Alcohol abuse	24.1	2.5
Alcohol dependence	7.8	2.0

1. **Any selected mental or alcohol disorder** includes depression, post traumatic stress disorder, general anxiety disorder, panic disorder, and alcohol abuse or dependence. However, these disorders cannot be added to create this rate because the disorders are not mutually exclusive, meaning that people may have a profile consistent with one or more of these disorders
2. **Alcohol abuse or dependence** includes alcohol abuse and alcohol dependence. These categories are mutually exclusive and can be added to create the variable alcohol abuse or dependence.

Source: Statistics Canada, Canadian Forces Mental Health Survey, 2013.

Depression was the most common disorder in the past 12 months

Focusing on 12-month rates for the remainder of the article, overall, 1 in 6 Regular Force members (16.5%) identified symptoms of at least one of the following five mental or alcohol disorders: major depressive episode, panic disorder, post-traumatic stress disorder, generalized anxiety disorder, and alcohol abuse or dependence (Table 1).

Depression was the most common of these disorders, with 8.0% of Regular Force members reporting symptoms over the past 12 months. Post-traumatic stress disorder and generalized anxiety disorder were the next most common mental disorders, followed by panic disorder. About the same proportion of Regular Force members reported symptoms of post-traumatic stress disorder (5.3%) and generalized anxiety disorder (4.7%).

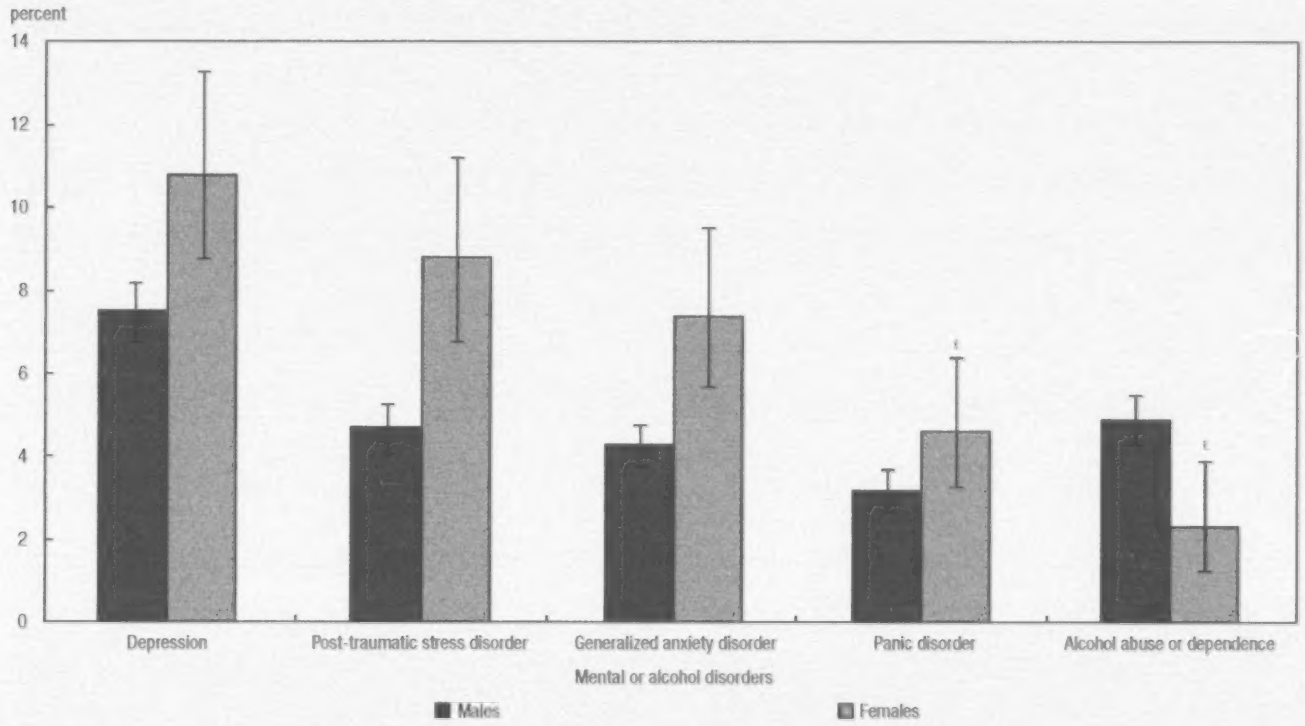
Mental disorders higher for women; alcohol abuse or dependence higher for men

In 2013, among Regular Force members, rates of depression, generalized anxiety disorder and post-traumatic stress disorder were higher for women than for men, while alcohol abuse or dependence were higher for men (Chart 1).

The percentage of female Regular Force members who reported symptoms of post-traumatic stress disorder in the past 12 months was almost double (8.8%) that of their male counterparts (4.7%). On the other hand, the rate of alcohol abuse or dependence among males was almost double (4.8%) that of females (2.3%[12]). About the same percentage of male and female Regular Force members met the criteria for panic disorder in the past 12 months.

These findings of higher rates of depression and anxiety disorders among women, and higher rates of alcohol abuse or dependence in men, are consistent with past research on Canadian Forces personnel,[13] the general Canadian population,[14] and the general population of many other countries.[15]

Chart 1
Regular Force members, 12-month rates of selected disorders by sex, 2013



[t] use with caution (these data have a coefficient of variation from 16.6% to 33.3%)
Note: The lines overlaid on the bars in this chart indicate the 95% confidence interval. They make it possible to compare statistical differences between estimates.
Source: Statistics Canada, Canadian Forces Mental Health Survey, 2013.

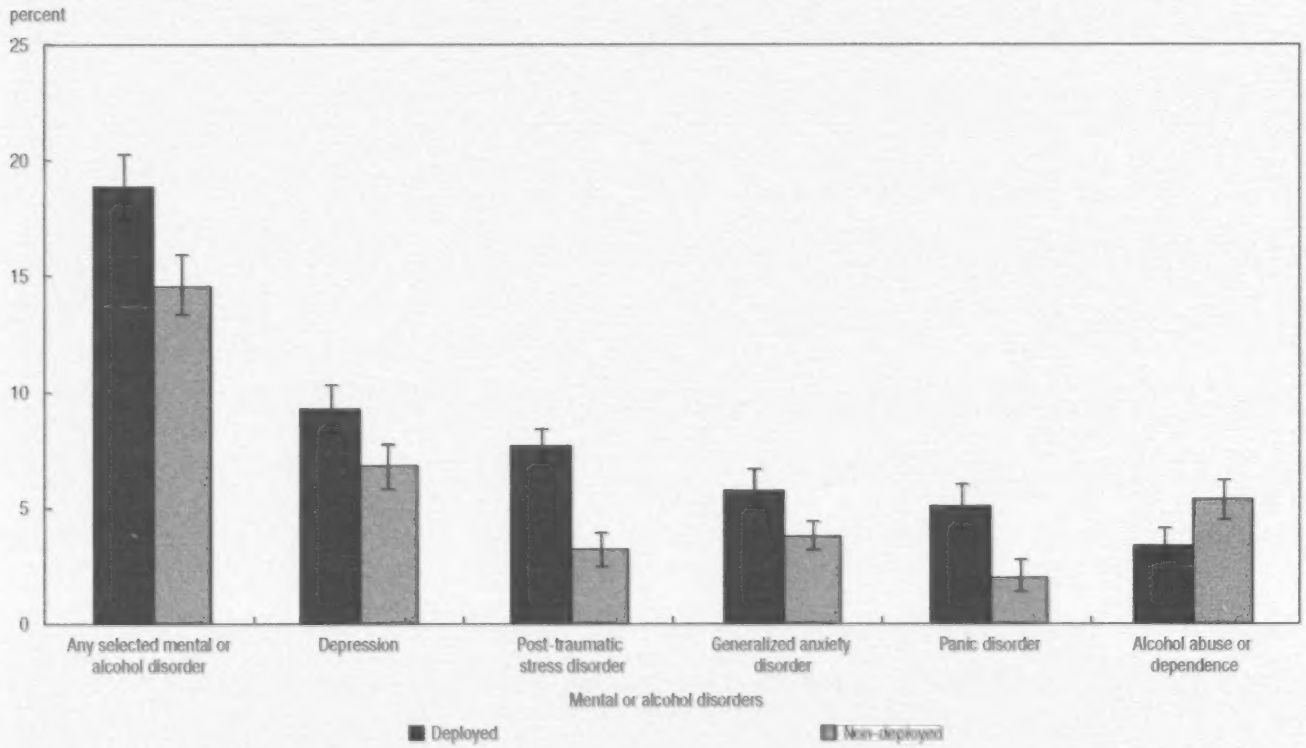
Mental disorders were higher among deployed Regular Force members

In 2013, about 45% of Regular Force members had deployed since 2001 in support of the mission in Afghanistan. This includes deployments in Afghanistan as well as elsewhere in southwest Asia.

Regular Force members who had been deployed in support of the mission in Afghanistan had higher rates of mental disorders than their non-deployed counterparts (Chart 2).

The rates of post-traumatic stress disorder and panic disorder were twice as high among deployed Regular Force members compared with those who were not deployed. In contrast, non-deployed Regular Force members (5.4%) were more likely to report symptoms of alcohol abuse or dependence than their deployed counterparts (3.4%).

Chart 2
Regular Force members, 12-month rates of selected disorders, by deployment in support of the mission in Afghanistan, 2013



Note: The lines overlaid on the bars in this chart indicate the 95% confidence interval. They make it possible to compare statistical differences between estimates.
Source: Statistics Canada, Canadian Forces Mental Health Survey, 2013.

Reserve Force members who had been deployed in support of the mission in Afghanistan had similar rates of mental disorders compared with deployed Regular Force members, except for alcohol related disorders, where Reserve Force members had higher rates (data not shown). The Reserve Force population is younger with more males than the Regular Forces, which may contribute to the higher rates of alcohol related disorders among reservists.[16]

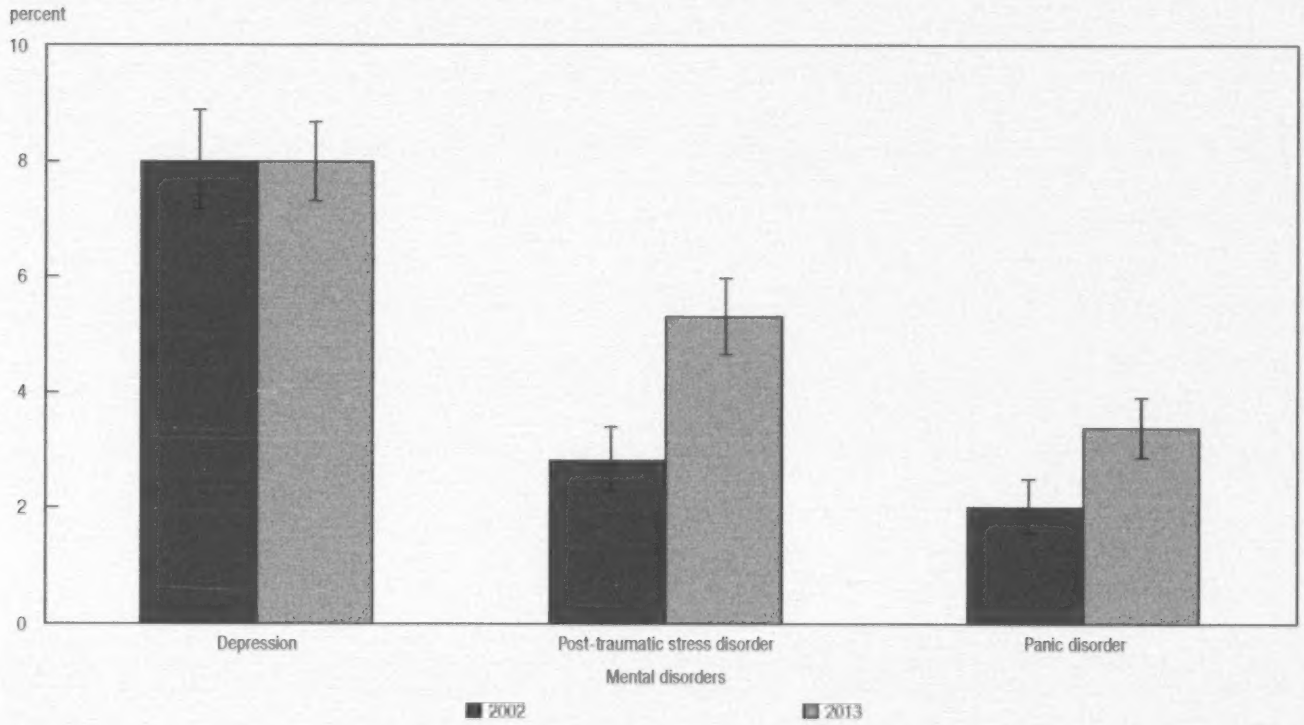
These findings are similar to past research that found participation in combat and peacekeeping missions was associated with mental disorders among military personnel.[17]

What has changed since 2002?

In 2002 and 2013, the 12-month rates for depression were about the same at 8.0% among Regular Force members.[18] However, the rates for panic disorder and post-traumatic stress disorder were both higher in 2013 (Chart 3). Post-traumatic stress disorder was twice as high in 2013 (5.3%) compared with 2002 (2.8%).

Some of these differences in the rates of mental disorders over time can be understood in a context of changes since 2002. That is, more than 40,000 Canadian military personnel were deployed in combat and peace support missions in Afghanistan and 158 of them lost their lives.[19,20] Differences in the rates over time may also be related to changes in mental health programs designed to support Canadian Armed Forces personnel.[21]

Chart 3
Regular Force members, 12-month rates of selected disorders, 2002 and 2013



Note: The lines overlaid on the bars in this chart indicate the 95% confidence interval. They make it possible to compare statistical differences between estimates.
Source: Statistics Canada, Canadian Community Health Survey – Mental Health and Well-Being – Canadian Forces, 2002 and Canadian Forces Mental Health Survey, 2013.

Comparing data from 2002 with 2013

In order to look at changes in mental health over time, two surveys were used: (1) the 2013 Canadian Forces Mental Health Survey (CFMHS) and (2) the 2002 Canadian Community Health Survey–Mental Health and Well-being –Canadian Forces (CCHS–CF). Some disorders from these surveys are comparable and some are not. This is because of differences between the two surveys in the selection of disorders, the survey questions, the sample and the populations they represent.

The rates for Reserve Force members for 2002 and 2013 cannot be compared across the two surveys because the criteria for selecting Reservists differed for each survey. In 2013, only those deployed in support of the mission in Afghanistan were surveyed. In 2002, on the other hand, Reserve Force members who were not deployed, as well as those who were deployed, were interviewed for the survey.

The two surveys measured disorders according to criteria from the World Health Organization Composite International Diagnostic Interview (WHO – CIDI), which has been revised since 2002. As a result of the updates, generalized anxiety disorder and alcohol abuse have changed in the way they are assessed and cannot be compared.

The disorders that can be compared using 2002 and 2013 data are depression, post-traumatic stress disorder and panic disorder.

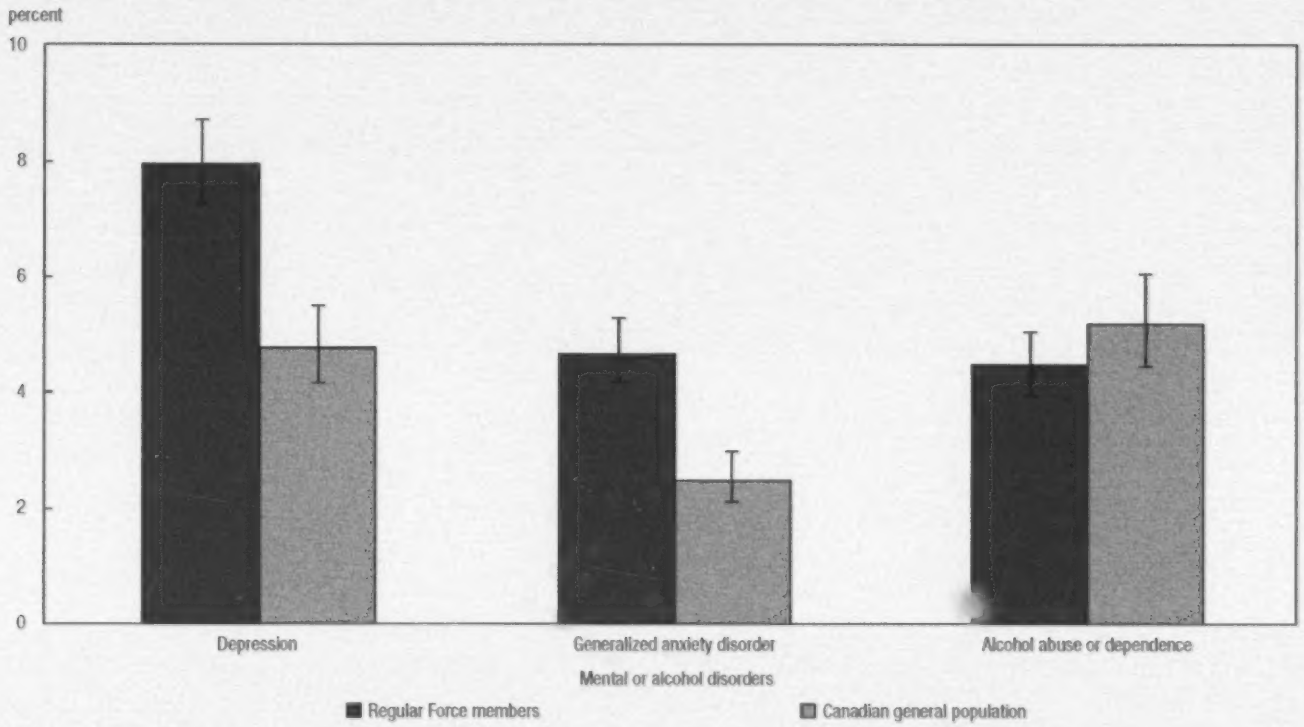
How does the mental health of Regular Force members and Canadians compare?

In general, the population of the Regular Forces is younger and there are more males than the general Canadian population. In order to compare rates of disorders between these two populations, the general Canadian population was **age and sex standardized** to the Regular Force population in 2013 to take the age and sex differences into account.

Age and sex standardized estimates

Age and sex standardized estimates are used in this article to adjust the age and sex distribution of the Canadian population to reflect a similar distribution of the Regular Force population. The estimates calculated for the standardized population are a measure of what the rate would be if both populations had the same age and sex structure. In this case, the Canadian rates were changed to reflect a similar proportion of males and younger people found in the Regular Forces. Thus, the Canadian rates have been created to provide a context for comparison.

Chart 4
Selected 12-month disorders by Regular Force members (2013) and Canadian population (2012),[1] aged 17 to 60



1. The rates for the Canadian general population have been age and sex standardized to the 2013 Regular Force member population for comparison purposes. The 12-month rates of the general Canadian population were calculated using the 2012 Canadian Community Health Survey – Mental Health. This survey excludes full-time regular members of the Canadian Armed Forces.
Note: The lines overlaid on the bars in this chart indicate the 95% confidence interval. They make it possible to compare statistical differences between estimates.
Source: Statistics Canada, Canadian Community Health Survey – Mental Health, 2012 and Canadian Forces Mental Health Survey, 2013.

Compared with the general Canadian population, rates of mental disorders were higher among Regular Force members. The percentage of Regular Force members who reported symptoms of depression and generalized anxiety disorder in 2013 was almost double that of the general Canadian population in 2012 (Chart 4). In 2002, Regular Force members also had higher rates of depression and panic disorder than the Canadian population.[22]

Approximately the same percentage of Regular Force members and the general Canadian population met the criteria for alcohol abuse or dependence in the 12 months prior to the survey. Close to 5% of Regular Force members and Canadians reported symptoms consistent with alcohol abuse or dependence.

Comparing content of the 2012 Canadian Community Health Survey –Mental Health and the 2013 Canadian Forces Mental Health Survey

The disorders that can be compared from both the 2013 Canadian Forces Mental Health Survey and the 2012 Canadian Community Health Survey – Mental Health are: depression, generalized anxiety disorder and alcohol abuse or dependence. The two surveys do not measure post-traumatic stress disorder using the same criteria and, as a result, these rates are not comparable.

Summary

In the 12 months prior to the 2013 survey, about 1 in 6 (16.5%) Regular Force members reported symptoms consistent with at least one of the five selected mental disorders: major depressive episode, panic disorder, post-traumatic stress disorder, generalized anxiety disorder, and alcohol abuse or dependence. While male Regular Force members reported more symptoms of alcohol abuse or dependence, females reported more symptoms of depression, post-traumatic stress disorder and generalized anxiety disorder.

A larger percentage of Regular Force members who had deployed in support of the mission in Afghanistan reported symptoms of at least one of the five selected mental disorders (18.9%) in the past 12 months, compared with their non-deployed counterparts (14.6%).

Between 2002 and 2013, rates of depression among Regular Force members remained relatively stable at around 8%, while rates of panic disorder and post-traumatic stress disorder rose.

When compared with the Canadian population, a larger percentage of Regular Force members reported symptoms consistent with depression and generalized anxiety disorder, while about the same percentage met the criteria for alcohol abuse or dependence in both populations.

What you need to know about this study

The rates presented for various disorders may underestimate the extent of mental health issues in the Canadian Armed Forces. This is because the Canadian Forces Mental Health Survey 2013 (CFMHS) measured five selected disorders, meaning not all mental disorders were covered by the survey. This same limitation applies to all mental health surveys. The CFMHS collected information from full-time Regular Force members of the Canadian Armed Forces and only from those reservists who had been deployed in support of the mission in Afghanistan.

Mental or alcohol disorders

The CFMHS 2013 used the World Health Organization - Composite International Diagnostic Interview 3.0 (WHO-CIDI) to classify people as meeting the criteria for select disorders. Although this is not a clinical diagnosis, this standardized instrument is designed to assess disorders in population surveys according to the Diagnostic and Statistical Manual of Mental Disorders version IV (DSM-IV).

This paper analyzes five disorders (lifetime and 12-month):

1. **Alcohol abuse or dependence:**
   - **Alcohol Abuse** is characterized by a pattern of recurrent alcohol use where at least *one* of the following occurs: failure to fulfill major roles at work, school or home, use in physically hazardous situations, recurrent alcohol-related problems, and continued use despite social or interpersonal problems caused or intensified by alcohol.
   - **Alcohol Dependence** is when at least *three* of the following occur in the same 12-month period: increased tolerance, withdrawal, increased consumption, unsuccessful efforts to quit, a lot of time lost recovering or using, reduced activity, and continued use despite persistent physical or psychological problems caused or intensified by alcohol.
2. **Depression (major depressive episode):** is identified as a period of two weeks or more with persistent depressed mood or loss of interest in normal activities, as well as other symptoms including: decreased energy, changes in sleep and appetite, impaired concentration, feelings of hopelessness, or suicidal thoughts.
3. **Generalized anxiety disorder:** is identified by a pattern of frequent, persistent worry and excessive anxiety about several events or activities lasting at least six months along with other symptoms.[23]
4. **Panic disorder:** is marked by recurrent, unexpected **panic attacks,** in the absence of real danger. These attacks are followed by at least one month of concern about having additional attacks or a change in behaviour related to the attacks.
   - **Panic attack:** is characterized by an isolated period of intense fear often associated with feelings of imminent doom. During these attacks, physical symptoms, such as heart palpitations, shortness of breath, or sweating, develop abruptly and reach a peak within 10 minutes of the start of the attack.[24]
5. **Post-traumatic stress disorder:** can occur after witnessing or experiencing a traumatic event involving actual or threatened death, serious injury or violent personal assault, such as sexual assault. The response to the event is marked by extreme fear and helplessness. Symptoms must persist for a minimum of one month and could include: repeated reliving of the event, disturbance of day-to-day activity, avoidance of stimuli associated with the event, and irritability, outbursts of anger, or sleeping difficulty.

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The authors wish to thank Jennifer Ali, Barbara Sérandour, and Melanie Hoover for their contributions to this article.

Notes

1. See American Psychiatric Association 2000.
2. See Rost et al., 2004.
3. See Hoge et al., 2006
4. See Lee et al., 2013.
5. See Sareen et al., 2007.
6. See Boulos and Zamorski 2013.
7. Deployment refers to a temporary assignment with a unit to participate in a military mission, operation or training, in a location outside of where a member is based.
8. See National Defence and the Canadian Armed Forces ***Careers*** 2014.
9. See National Defence and the Canadian Armed Forces ***Careers*** 2014.
10. See Pearson et al., 2013.
11. Analyses were completed with the Canadian Community Health Survey – Mental Health 2012.
12. This statistic should be used with caution since these data have a coefficient of variation ranging from 16.6% to 33.3%.
13. See Mota et al., 2012.
14. See Pearson et al., 2013.
15. See Seedat et al., 2009.
16. See Park, 2008.
17. See Sareen et al., 2007.
18. The age and sex characteristics of the Regular Force population in 2002 and 2013 were similar. Due to these similarities, the comparisons made for the Regular Force members from 2002 to 2013 did not take into account age or sex differences.
19. See Boulos and Zamorski 2013.
20 See Zamorski et al., 2014.
21. See National Defence 2013.
22. See National Defence and the Canadian Armed Forces 2014.
23. Other symptoms of generalized anxiety disorder include difficulty concentrating, irritability, sleep disturbance, shortness of breath, gastrointestinal symptoms, and restlessness. This anxiety is difficult to control and causes significant impairment when attempting to participate in normal daily activities.
24. The 14 symptoms associated with panic attacks include: palpitations, pounding heart or accelerated heart rate, sweating, trembling or shaking, sensation of shortness of breath, feeling of choking, chest pain or discomfort, nausea or abdominal distress, feeling dizzy, unsteady, light-headed or faint, derealisation ('not really there') or depersonalization (the feeling that things around them were not real or like a dream), fear of losing control or going crazy, fear of dying, feeling numbness or tingling sensations, chills or hot flushes, and dry mouth.

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